# IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

HALDORSEN, Jakob B. U.

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Application No: 10/601,503

Filed: June 23, 2003

Title: BOREHOLE SONIC DATA PROCESSING

METHOD

Customer Number 37003

Group Art Unit: 3662

Examiner: LOBO, IAN J.

Attorney Docket No.: 60.1515/1517/1518

Certificate of Mailing

I hereby certify that this correspondence is being deposited with the United States Postal Service on the date shown below with sufficient postage as First Class Mail in an envelope addressed to: Hon. Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450.

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March 14, 2005 Date

Lorraine Ronnlund

### INFORMATION DISCLOSURE STATEMENT

HONORABLE COMMISSIONER FOR PATENTS P. O. Box 1450 Alexandria, VA 22313-1450

Sir:

In accordance with 37 C.F.R. §1.56, 1.97 and 1.98, the Applicant wishes to bring the reference materials listed in the attached Form PTO-1449 to the attention of the U. S. Patent and Trademark Office. Copies of the references are provided for the Examiner's convenience.

No representation is made or intended that a complete and exhaustive prior art search has been made, or that no better references than those set forth below are available. Furthermore, this Statement does not constitute an admission that these references are properly citable against the present application as prior art. It is respectfully requested that these references be considered by the Examiner and formally made of record in this case.

This information disclosure statement is being filed before receipt of the first office action on the merits. Therefore, applicants believe that no fees are due. The Commissioner is authorized to charge or credit any deficiency/overpayment to <u>Deposit Account No. 19-0615</u>. Two copies of this paper are attached.

Respectfully submitted,

William B. Batzer

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Date: MARCH 14, 2005

FORM PTO-14 U.S. Separtment of Commerce Than and Trademark Office

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## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use several sheets if necessary)

ATTY. DOCKET NO:	SERIAL NO.:	_
60.1555/1517/1518	10/601,503	
APPLICANT:	EXAMINER:	
HALDORSEN, Jakob B. U.	LOBO, IAN J.	ĺ
FILING DATE:	GROUP:	
June 23, 2003	3662	ı

HS	<b>PATENT</b>	DOCIN	MENTS

Exam Init.	Document Number Date		Name	Class	Sub- class	Filing date if appropriate	
	5,555,530	09/10/96	Meehan	367	45	12/06/93	
	5,971,095	10/26/99	Ozbek	181	112	01/08/97	
	6,446,008	09/03/02	Ozbek	702	117	05/18/99	

## FOREIGN PATENT DOCUMENTS

Exam Init.	Document Number	Date	Country	Class	Sub- class	<u>Trans</u> Yes	lation No
	10-62555	03/06/98	Japan			X	
				_			

#### OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	Chang, C. et al. "Localized Maps of the Subsurface". Oilfield Review, Spring Issue (1998).
 2	Coates, R. T. et al. "Single Well Sonic Imaging: High-Definition Reservoir Cross-

- Sections from Horizontal Wells". SPE-CIM, Int'l Conf. Horizontal Well Tech. (2000)

  3 Esmersoy, C. et al. "Acoustic Imaging of Reservoir Structures from a Horizontal Well: The Leading Edge". Soc. Expl. Geophys., Vol. 17, pp. 940-946.
  - Marple, S. L. "Digital Spectral Analysis with Applications "Prentice-Hall Signal Processing Series (1987)
- Processing Series (1987).
   Miller, D. et al. "A New Slant on Seismic Imaging: Migration and Integral Geometry: Geophysics, Vol. 52, pp. 943-964 (July 1987).
- Watanabe, S. et al. "Reflector Imaging Using Borehole Acoustic Reflection Survey". SPWLA-J, Paper Q (September 1998).
  - Wiggins, R. A. et al. "Recursive Solution to the Multichannel Filtering Problem". J. Geophys. Res. Vol. 70, pp. 1885-1891 (April 1965).
- 8 Yamamoto, H. et al. "Borehole Acoustic Refection Survey Experiments in Horizontal Wells for Accurate Well Positioning". SPE-CIM, Int'l Conf. Horizontal Well Tech. (2000).

EXAMINER DATE CONSIDERED

**EXAMINER:** Initial if citation considered, whether or not citation is in conformance with MPEP 609: Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant